

# COUNTRY: THAILAND

**SCORE: 48.4 | RANK: 19/24**

Thailand's laws and policies in relation to cloud computing and the digital economy are patchy, with strengths in some areas and significant gaps and weaknesses in others.

Thailand has implemented comprehensive cybercrime legislation, which helps to enhance confidence in information technology (IT). Thailand also has good laws for electronic commerce and electronic signatures. However, Thailand has no privacy laws, and this is a major weakness.

In January 2015, two Copyright Amendment laws were approved: the Copyright Act (No. 2) B.E. 2558 (A.D. 2015), and Copyright Act (No. 3) B.E. 2558 (A.D. 2015). These two new laws implement many of the key provisions of the WIPO Copyright Treaty. They also introduced an Internet service provider (ISP) liability scheme for copyright infringements that applies in broad circumstances.

Additional risks in Thailand include mandatory Internet censorship (some of which is clearly political in nature) and filtering, and procurement preference policies.

Overall, Thailand's position in the Scorecard rankings has risen slightly since 2016 — from 21st to 19th — mostly because of incremental improvements in the Cybercrime and Intellectual Property Rights sections. Improvements in the IT Readiness and Broadband Developments based on the Thailand Digital Economy and Social Development Plan 2016 are also ongoing.

# THAILAND	RESPONSE	EXPLANATORY TEXT
<b>DATA PRIVACY (SCORE: 1.8/12.5   RANK: 23/24)</b>		
1. Is a data protection law or regulation in place?	Draft	A draft Personal Data Protection Bill has been under development for many years but there is no timetable for implementation.
2. What is the scope and coverage of the data protection law or regulation?	Not applicable	There is no data protection law in place in Thailand.
3. Is a data protection authority in place?	✘	There is no data protection authority in Thailand.
4. What is the nature of the data protection authority?	Not applicable	There is no data protection authority in Thailand.
5. Is the data protection authority enforcing the data protection law or regulation in an effective and transparent manner?	Not applicable	There is no data protection authority in Thailand.
6. Is the data protection law or regulation compatible with globally recognized frameworks that facilitate international data transfers?	Not applicable	Thailand is a member of the Asia Pacific Economic Cooperation (APEC), but there is no relevant privacy law at this stage.
7. Are data controllers free from registration requirements?	✔	There are no registration requirements in Thailand.
8. Are there cross-border data transfer requirements in place?	No requirements	There are no cross-border data transfer requirements in Thailand.
9. Are cross-border data transfers free from arbitrary, unjustifiable, or disproportionate restrictions, such as national or sector-specific data or server localization requirements?	📌	There are no cross-border data transfer requirements in Thailand. As a result, there are no barriers to the transfer of data, but issues may arise in the trust and confidence of consumers in providing data to organizations in Thailand.
10. Is there a personal data breach notification law or regulation?	✘	There are no data breach notification requirements in Thailand. As of June 2017, a National Cybersecurity bill is being considered by the Council of State and it may create breach notification requirements. However, it is unclear when the bill will be approved and implemented.

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11. Are personal data breach notification requirements transparent, risk-based, and not overly prescriptive?	Not applicable	There are no data breach notification requirements in Thailand.
12. Is an independent private right of action available for breaches of data privacy?	✓	<p>Although Thailand does not currently have any specific data protection or privacy laws, the sale or disclosure of personal information without the consent of the relevant person could be subject to the privacy related provisions of other laws (e.g., Section 37 of the Constitution and Section 74 of the Telecommunications Business Act).</p> <p>Some breaches could also be subject to restrictions on disclosure of pictures or statements that violate or affect a person's privacy, reputation or dignity (Section 34 of the Constitution), or restrictions on disclosure of secret information in certain relationships (Sections 323 and 324 of the Penal Code).</p>
<b>SECURITY (SCORE: 4/12.5   RANK: 19/24)</b>		
1. Is there a national cybersecurity strategy in place?	✓	Thailand's government approved a Master Plan for National Defense against Cyber Threats for 2017–2021 in November 2016. This followed the Defence Ministry's February 2016 launch of a National Framework on Cyber Security composed of three core strategies: defense, deterrence, and cooperation.
2. Is the national cybersecurity strategy current, comprehensive, and inclusive?	✓	<p>Thailand's cybersecurity master plan contains six work plans:</p> <ul style="list-style-type: none"> <li>(1) Establish cyber organizations;</li> <li>(2) Protect infrastructure;</li> <li>(3) Prepare for cyber operations;</li> <li>(4) Develop cyber potential;</li> <li>(5) Support national cyber potential; and</li> <li>(6) Plan cyber cooperation.</li> </ul> <p>The plan also establishes a ministry-level cybersecurity center.</p>
3. Are there laws or appropriate guidance containing general security requirements for cloud service providers?	✗	As of June 2017 there are no general security requirements for cloud service providers, although security requirements are likely to be included in the proposed privacy and cybersecurity legislation.
4. Are laws or guidance on security requirements transparent, risk-based, and not overly prescriptive?	✗	There are no general security requirements for cloud service providers in Thailand.
5. Are there laws or appropriate guidance containing specific security audit requirements for cloud service providers that take account of international practice?	✗	There are no specific security audit requirements or cloud service providers. Although security requirements are likely to be included in the proposed privacy and cybersecurity legislation, these may not include audit requirements.
6. Are international security standards, certification, and testing recognized as meeting local requirements?	✗	<p>Thailand is not a participant in the Common Criteria Recognition Agreement (CCRA) &lt;<a href="http://www.commoncriteriaportal.org">www.commoncriteriaportal.org</a>&gt;.</p> <p>International security standards, certification, and testing are not recognized as meeting local requirements in government procurement opportunities in Thailand.</p>
<b>CYBERCRIME (SCORE: 9/12.5   RANK: 17/24)</b>		
1. Are cybercrime laws or regulations in place?	✓	<p>The Computer Crime Act 2007 (B.E.2550) contains a mix of general computer crime and cybercrime provisions.</p> <p>The legislation was further strengthened by the Computer Crimes Act (No. 2) B.E. 2560 (2017).</p>
2. Are cybercrime laws or regulations consistent with the Budapest Convention on Cybercrime?	✓	The key provisions of the Computer Crime Act 2007, as amended in 2017, follow the text of the Convention on Cybercrime.
3. Do local laws and policies on law enforcement access to data avoid technology-specific mandates or other barriers to the supply of security products and services?	✗	<p>In December 2016 an amendment to Thailand's Computer Crime Act 2007 passed the National Legislative Assembly. The changes came into force in May 2017.</p> <p>Under existing law, Section 18(7) of the Computer Crime Act contains a relevant requirement to:</p> <p>"decode any person's computer data or instruct any person related to the encryption of computer data to decode the computer data or cooperate with a relevant competent official in such decoding."</p> <p>Under the revised law, Section 18 will allow authorities to access encrypted data for a broader range of offenses (not just cybercrimes). There is uncertainty about how the law will be implemented in practice, but at the time it was proposed the debate included specific references to requiring "backdoor" access by law enforcement authorities.</p>

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4. Are arrangements in place for the cross-border exchange of data for law enforcement purposes that are transparent and fair?	✓	Thailand has taken a different approach to many other countries on this issue. Thailand passed the Act on Mutual Assistance in Criminal Matters 1992 (B.E. 2535). This Act covers all aspects of providing and seeking assistance upon receiving requests from foreign states.  Thailand has also signed a small number of Mutual Legal Assistance Treaties (MLATs), and if the Thai legislation is inconsistent with the terms or provisions in a treaty, the treaty shall prevail.
<b>INTELLECTUAL PROPERTY RIGHTS (SCORE: 6.5/12.5   RANK: 14/24)</b>		
1. Are copyright laws or regulations in place that are consistent with international standards to protect cloud service providers?	🔵	Thailand's Copyright Act 1994 (B.E. 2537) came into force in 1995.  In 2015, two Copyright Amendment laws were approved: the Copyright Act (No. 2) (B.E. 2558 A.D. 2015) and Copyright Act (No. 3) (B.E. 2558 A.D. 2015). These two laws implemented many of the key provisions of the WIPO Copyright Treaty, but Thailand has not signed the WIPO Copyright Treaty.  Copyright "safe harbor" protection for intermediaries such as cloud service providers is contained in the 2015 amendments to copyright laws. The provisions exempt Internet intermediaries from liability in broad circumstances, provided that they did not control, initiate, or order the infringement. The intermediary is shielded from liability for content until they receive a court order ordering them to remove it.
2. Are copyright laws or regulations effectively enforced and implemented?	🔵	Thailand has been the subject of regular criticism for failing to impose criminal remedies for copyright breaches that are "sufficient to provide a deterrent" (TRIPS Article 61). Substantial delays are also common in investigations and enforcement.  An effective intellectual property "safe harbor" has been implemented for cloud service providers.
3. Is there clear legal protection against misappropriation of trade secrets?	✓	In Thailand trade secrets are protected by the Trade Secret Act 2002 (B.E. 2545).
4. Is the law or regulation on trade secrets effectively enforced?	🔵	Trade secrets enforcement in Thailand is rare. One study, based on statistics from the Central Intellectual Property and International Trade Court (IP&IT Court), found that only 66 trade secret cases were brought to the IP&IT Court from 2004 to 2014. The study also noted that most cases were unsuccessful < <a href="http://www.tilleke.com/sites/default/files/2016_Feb_Thailand_Trade_Secret_Act.pdf">www.tilleke.com/sites/default/files/2016_Feb_Thailand_Trade_Secret_Act.pdf</a> >.
5. Is there clear legal protection against the circumvention of Technological Protection Measures?	🔵	Thailand's Copyright Act 1994 (B.E. 2537) was amended in 2014 to include provisions on technological protection measures (TPMs).  Circumvention of TPMs is prohibited under Section 53 of the amended legislation. However, the provision is very restricted, as there is a requirement that the offender has "knowledge that such circumvention would induce or cause infringement on a copyrighted work." There is also no prohibition on the sale or distribution of circumvention devices.
6. Are laws or regulations on the circumvention of Technological Protection Measures effectively enforced?	✗	The anti-circumvention provisions in Thailand are recent, and there is no evidence that they are being enforced. The significant gaps in the legislation make it unlikely that the law will have a significant impact on the trade in circumvention devices.
7. Are there clear legal protections in place for software-implemented inventions?	🔵	The law in Thailand does not specifically include or exclude patents for software related inventions.  There do not appear to be any formal decisions or court judgments on this issue.  The Thai Patent Office may allow a business method implemented in a computer software or a software-related invention to be considered as a patentable subject matter, but they have not yet issued formal guidelines on the issue.
8. Are laws or regulations on the protection of software-implemented inventions effectively implemented?	✗	The Thai Patent Office is reported to be considering the development of examination guidelines on patents for software related inventions. In the absence of these guidelines there is considerable uncertainty regarding patents for software related inventions in Thailand.
<b>STANDARDS AND INTERNATIONAL HARMONIZATION (SCORE: 10/12.5   RANK: 13/24)</b>		
1. Is there a regulatory body responsible for standards development for the country?	✓	The Thai Industrial Standards Institute (TISI) < <a href="http://www.tisi.go.th">www.tisi.go.th</a> > was established in the Ministry of Industry as the national standards body of Thailand.
2. Are international standards favored over domestic standards?	✓	Thailand has signed the World Trade Organization (WTO) Technical Barriers to Trade (TBT) Code of Good Practice for the Preparation, Adoption, and Application of Standards, and considers international standards carefully.
3. Does the government participate in international standards setting process?	✓	Thailand participates in relevant International Standards Organization (ISO) and International Electrotechnical Commission (IEC) standard-setting processes and is a full member of the ISO. Thailand is an observer in the top-level ICT standards committee (JTC-1) < <a href="http://www.iso.org/isoiec-jtc-1.html">www.iso.org/isoiec-jtc-1.html</a> >.

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4. Are e-commerce laws or regulations in place?	✓	The Electronic Transactions Act 2001, which entered into force in April 2002, governs both civil and commercial transactions made electronically, with exceptions only as may be prescribed by royal decree pursuant to the law. It does not override laws and regulations intended for consumer protection.
5. What international instruments are the e-commerce laws or regulations based on?	UNCITRAL Model Law on E-Commerce	The Electronic Transactions Act 2001 includes a mix of provisions from several international models, but the key sections follow the UNCITRAL Model Law on E-Commerce. (The electronic signatures sections cover the Model Law on Electronic Signatures.) More recent amendments have attempted to align the law with the UN Convention on Electronic Contracting.
6. Is there a law or regulation that gives electronic signatures clear legal weight?	✓	Chapter 2 of the Electronic Transactions Act 2001 contains a section on electronic signatures (Section 26).  The Electronic Transactions Act provides provisions on requirements for reliable electronic signatures and certification service providers. Under the law, there are no licensing requirements for electronic transactions-related service providers. However, a royal decree is expected that would require a service provider to notify, register, or obtain a license before providing electronic transactions-related services. This extends to Certification Authority (CA) services for issuing digital certificates and to certifying the reliability of Certification Service Providers.  Thailand has established the Electronic Transactions Development Agency <www.etcha.or.th> to promote electronic transactions to the government, enterprise, and public sectors and to support the development of guidelines and monitoring systems related to security in electronic transactions.
7. Are cloud service providers free from mandatory filtering or censoring?	✗	Thailand has one of the most intrusive Internet filtering and online censorship regimes in place.  Internet filtering has increased considerably since 2014. Websites seen to be critical of the royal family or the government have been temporarily or permanently blocked, including access to entire social media networks. Material deemed disruptive to civil order has also been targeted. In addition, the government has historically heavily filtered pornographic and explicit content. The Thai Government maintains a blacklist, and ISPs are required to block all access to these sites. (The responsible Ministry is the Digital Economy and Society Ministry <www.mdes.go.th>.)
<b>PROMOTING FREE TRADE (SCORE: 6/12.5   RANK: 17/24)</b>		
1. Is a national strategy or platform in place to promote the development of cloud services and products?	✓	Thailand has a government cloud computing strategy in place, known as the G-Cloud Framework. The framework includes some limited policies and standards, and a suite of information sharing and education initiatives <www.ega.or.th/en/profile/905>.
2. Are there any laws or policies in place that implement technology neutrality in government?	✗	There are no specific laws or policies promoting technology neutrality in government procurement in Thailand.
3. Are cloud computing services able to operate free from laws or policies that either mandate or give preference to the use of certain products, services, standards, or technologies?	✓	There are no laws or policies on mandatory product requirements or preferences in Thailand that would have an effect on cloud services or products.
4. Are cloud computing services able to operate free from laws, procurement policies, or licensing rules that discriminate based on the nationality of the vendor, developer, or service provider?	✗	Numerous government policies encourage domestic procurement. The 1992 Prime Minister's Office Regulation on Procurement (as amended) provides a preference for domestic goods and services by using a range of initiatives in the Thai Government procurement market. These include a price preference margin for all local suppliers of Thai goods in the range of 3% to 7% and the requirement of having a Thai leading firm for services contracts and if that is not possible, 50% Thai personnel to be engaged on the project.
5. Has the country signed and implemented international agreements that ensure the procurement of cloud services is free from discrimination?	✗	Thailand is an observer, but not a full member, of the World Trade Organization (WTO) plurilateral Agreement on Government Procurement <www.wto.org/english/tratop_e/gproc_e/gp_gpa_e.htm>.
6. Are services delivered by cloud providers free from tariffs and other trade barriers?	📌	No general tariffs are imposed on the download of software from foreign sources, as a download is not considered to be an importation.  However, withholding tax applies to software downloads by companies based on the price of the download, and this may capture some cloud-related services. The rate of withholding tax ranges from 5% to 15%. The effect of the tax may be reduced where a double taxation treaty or agreement is in place with the vendor's country.

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7. Are cloud computing services able to operate free from laws or policies that impose data localization requirements?	✔	There have been some limited proposals to establish data localization rules in Thailand, but there are no actual requirements in place as of June 2017.
<b>IT READINESS, BROADBAND DEPLOYMENT (SCORE: 11.1/25   RANK: 17/24)</b>		
1. Is there a National Broadband Plan?	<p>By 2020:</p> <ul style="list-style-type: none"> <li>Extend broadband coverage to 95%</li> </ul> <p>By 2020:</p> <ul style="list-style-type: none"> <li>Provide broadband Internet access of at least 100 Mbps in economically important provinces</li> </ul>	<p>Thailand does not have a single cohesive, comprehensive and funded National Broadband Plan. However, it has established the National Broadband Policy 2011, which includes set targets and it has set broader targets in the Thailand Digital Economy and Social Development Plan 2016.</p> <p>In November 2011, Cabinet approved the National Broadband Policy &lt;<a href="http://www.mdes.go.th/assets/portals/1/files/Broadband_ENG_edit.pdf">www.mdes.go.th/assets/portals/1/files/Broadband_ENG_edit.pdf</a>&gt; and the following goals were set:</p> <ul style="list-style-type: none"> <li>Extend broadband coverage to 80% of the population by 2015;</li> <li>Extend broadband coverage to 95% of the population by 2020;</li> <li>Provide broadband Internet access of at least 100 megabits per second (Mbps) in economically important provinces by 2020.</li> </ul> <p>Following acceptance of the policy, the National Information and Communication Technology Committee developed the policy into an action plan, with five targeted programs requiring coordination with the relevant ministries: e-Government, e-Agriculture, e-Healthcare, e-Education, and e-Disaster.</p> <p>The action plan was further supported by a memorandum of understanding among Thailand's six major telecommunication service providers to support the National Broadband Policy by seeking ways to promote infrastructure and network sharing as well as fair network management and network usage fees.</p> <p>In 2016 a new national economic development plan was announced. Thailand 4.0 aims to transition Thailand to a value-based/knowledge-based economy and setting the digital economy as a new engine of growth, transforming from economic plans focusing on agriculture (Thailand 1.0), light industry (Thailand 2.0), and advanced industry (Thailand 3.0).</p> <p>To support Thailand 4.0, Digital Thailand &lt;<a href="http://www.digitalthailand.in.th">www.digitalthailand.in.th</a>&gt; was launched with the Thailand Digital Economy and Social Development Plan 2016 comprising four phases over a 20-year roadmap &lt;<a href="http://www.digitalthailand.in.th/drive/Digital%20Thailand%20pocket%20book%20EN.pdf">www.digitalthailand.in.th/drive/Digital%20Thailand%20pocket%20book%20EN.pdf</a>&gt;.</p> <p>The Digital Thailand Plan sets a number of 10-year goals:</p> <ol style="list-style-type: none"> <li>(1) Competitiveness — Thailand will place in the top 15 of the World Competitiveness Scoreboard and digital sectors will contribute at least 25% to GDP;</li> <li>(2) Equal opportunities — All citizens to have access to broadband Internet, as a basic utility. Thailand will place in the top 40 of the ICT Development Index (IDI);</li> <li>(3) Human capital — All Thais will be digitally literate;</li> <li>(4) Government Reform — Thailand will place in the top 50 of the UN e-Government rankings.</li> </ol> <p>The Digital Thailand Plan prioritizes a number of Phase 1 activities to invest and build a digital foundation over an 18-month period. The priority areas include infrastructure, economy, society, and government. The infrastructure activities to be achieved by 2018 include:</p> <ul style="list-style-type: none"> <li>Deploying broadband to all 70,000 villages;</li> <li>Expansion of 4G services across the country;</li> <li>Free WiFi at 10,000 locations;</li> <li>Doubling international bandwidth;</li> <li>Establishing the Digital Thailand Infrastructure Fund.</li> </ul>

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2. Is the National Broadband Plan being effectively implemented?	1	<p>Thailand faces challenges and delays both with implementing existing targets and those identified in the transition to a digital economy.</p> <p>There are a number of organizational changes that are occurring:</p> <ul style="list-style-type: none"> <li>• A new Digital Economy Policy Committee that will oversee the National Broadcasting and Telecommunications Commission (NBTC), Thailand's formerly independent telecoms regulator.</li> <li>• In September 2016, the government established the new Ministry of Digital Economy and Society (MDES) &lt;<a href="http://www.mdes.go.th">www.mdes.go.th</a>&gt; by transforming the former Ministry of Information and Communication Technology (MICT). The new MDES appears to have been tasked with amending and adopting legislation to support the digital economy, and to restructure and upgrade the state-controlled telecom and postal sectors.</li> </ul> <p>In the Economic Outlook for Southeast Asia, China and India (January 2017), the Organisation for Economic Co-operation and Development (OECD) identifies challenges for Thailand transitioning to a digital economy:</p> <p>"The new Ministry of Digital Economy and Society acts as a focal point in the government. Programmes have been established to promote ICT use in the country, though barriers to the development of the sector remain to be addressed. These include inadequate ICT use, the lack of a proper regulatory framework for ICT infrastructure and services, using ICT to improve the efficiency of trade administration, private investment in the sector, and ICT literacy and advanced skills."</p> <p>In early 2015, the government announced that all of Thailand's 75,000 villages would have access to low-cost, high-speed Internet through creation of a national fiber broadband network, which would be financed and carried out by public/private partnerships and joint ventures between the government and private companies.</p> <p>In January 2016, cabinet approved BT15 billion (US\$ 141 million) to be invested in broadband Internet networks for 39,000 villages and the government announced BT38 billion (US\$ 1.1 billion) of upgrades to the broadband backbone, extending coverage to be nationwide and improving data speeds by 400%. The government also announced expansion of 4G services. In January 2017, it was reported that the BT.15 billion national broadband construction project was facing delays as officials were unable to complete the terms and conditions for an auction seeking broadband equipment suppliers.</p> <p>As of June 2017, it is too early to assess progress against the Phase 1 activities of the Thailand Digital Economy and Social Development Plan 2016, such as the Digital Thailand Infrastructure Fund.</p>
3. Are there laws or policies that regulate "net neutrality"?	No regulation	There has been no formal or detailed public consideration of net neutrality regulation in Thailand at this stage.
4. Base Indicators		
4.1. Population (millions) (2015) • Total for all countries in this scorecard: 4,700 million	67	In 2015, the population of Thailand increased by 0.3%. [International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec. 2016) < <a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a> >]
4.2. Urban Population (%) (2015) • Average for all countries in this scorecard: 73%	50%	In 2015, the urban population of Thailand increased by 2.4%. [World Bank, Data Catalog, Indicators, Urban Population (Jan. 2017) < <a href="http://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS">data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS</a> >]
4.3. Number of Households (millions) (2015) • Total for all countries in this scorecard: 1,249 million	20	In 2015, the number of households in Thailand increased by 0.3%. [International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec. 2016) < <a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a> >]
4.4. Population Density (people per square km) (2015) • Average for all countries in this scorecard: 471	133	In 2015, the population density of Thailand increased by 0.3%. [World Bank, Data Catalog, Indicators, Population Density (Jan. 2017) < <a href="http://data.worldbank.org/indicator/EN.POP.DNST">data.worldbank.org/indicator/EN.POP.DNST</a> >]
4.5. Per Capita GDP (US\$ 2015) • Average for all countries in this scorecard: US\$ 22,649	\$5,815	In 2015, the per capita GDP for Thailand increased by 2.8% to US\$ 5,815. This was above the five-year compound annual growth rate (CAGR) from 2010–2015 of 2.6%.  This ranks Thailand 20th for value of per capita GDP and 7th for growth (CAGR) for this indicator in this scorecard.  [World Bank, Data Catalog, Indicators: GDP Per Capita, Current US\$ (Jan. 2017) < <a href="http://data.worldbank.org/indicator/NY.GDP.PCAP.CD">data.worldbank.org/indicator/NY.GDP.PCAP.CD</a> > and GDP Growth, Annual % (Jan. 2017) < <a href="http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG">data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG</a> >]

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<p>4.6. ICT Service Exports (billions of US\$) (2015)</p> <ul style="list-style-type: none"> <li>Total for all countries in this scorecard: US\$ 978 billion</li> </ul>	\$9	<p>In 2015, the value of ICT service exports for Thailand decreased by 2.8% to US\$ 9.42 billion. This was below the five-year compound annual growth rate (CAGR) from 2010–2015 of 5.9%.</p> <p>This ranks Thailand 17th for value of ICT service exports and 7th for growth (CAGR) for this indicator in this scorecard.</p> <p>[World Bank, Data Catalog, Indicators: ICT service exports US\$ (Jan. 2017) &lt;data.worldbank.org/indicator/BX.GSR.CCIS.CD&gt;]</p>
<p>4.7. Personal Computers (% of households) (2015)</p> <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 63%</li> </ul>	30%	<p>In 2015, 29.5% of households in Thailand had personal computers. This is a decrease of -12.9% since 2014 and ranks Thailand 115th out of 236 countries surveyed. The growth from 2014 is below the five-year compound annual growth rate (CAGR) from 2010 to 2015 of 5.3%.</p> <p>This ranks Thailand 20th for the number of personal computers (as a % of households) and 9th for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec. 2016) &lt;www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx&gt;]</p>
5. IT and Network Readiness Indicators		
<p>5.1. ITU ICT Development Index (IDI) (2016)</p> <p>(score is out of 10 and covers 175 countries)</p> <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 6.58</li> </ul>	5.18	<p>Thailand's ITU ICT Development Index (IDI) for 2016 is 5.18 (out of 10), resulting in a rank of 82nd (out of 175 economies). The 2016 IDI for Thailand increased by 2.6%, and the IDI ranking declined by 3 from a rank of 79th since 2015.</p> <p>This ranks Thailand 19th in the ITU ICT Development Index and 7th for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), Measuring the Information Society (Dec. 2016) &lt;www.itu.int/net4/ITU-D/idi/2016&gt;]</p>
<p>5.2. World Economic Forum Networked Readiness Index (NRI) (2016)</p> <p>(score is out of 7 and covers 139 countries)</p> <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 4.77</li> </ul>	4.20	<p>Thailand has a Networked Readiness Index (NRI) score of 4.2 (out of 7), resulting in a rank of 62nd (out of 139 economies) and a rank of 13th (out of 34) in the Upper middle income grouping of economies. The 2016 NRI for Thailand increased by 3.7% and improved by 5 places from a rank of 67th since 2015.</p> <p>This ranks Thailand 17th in the ITU ICT Development Index and 8th for growth (CAGR) for this indicator in this scorecard.</p> <p>[World Economic Forum, Global Information Technology Report (2016) &lt;reports.weforum.org/global-information-technology-report-2016&gt;]</p>
6. Internet Users and International Bandwidth		
<p>6.1. Internet Users (millions) (2015)</p> <ul style="list-style-type: none"> <li>Total for all countries in this scorecard: 2,330 million</li> </ul>	26	<p>[International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec. 2016) &lt;www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx&gt;]</p>
<p>6.2. Internet Users (% of population) (2015)</p> <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 67%</li> </ul>	39%	<p>In 2015, 39% of the population in Thailand used the Internet, resulting in a ranking of 128th out of 236 countries surveyed by the ITU. This is an increase of 12.7% since 2014 and is above the five-year compound annual growth rate (CAGR) from 2010–2015 of 11.9%.</p> <p>This ranks Thailand 22nd in the proportion of the population using the Internet and 5th for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec. 2016) &lt;www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx&gt;]</p> <p>Note: There may be some variations as to how countries calculate this. Some countries base this upon all or part of the population — such as between 16 and 72 years of age.</p>
<p>6.3. International Internet Bandwidth (total gigabits per second (Gbps) per country) (2015)</p> <ul style="list-style-type: none"> <li>Total for all countries in this scorecard: 117,736 Gbps</li> </ul>	1,720	<p>Thailand has increased its international Internet bandwidth by 34% since 2014 to 1,720 Gbps and is ranked 28 out of 236 countries surveyed by the ITU. The growth from 2014 is below the five-year compound annual growth rate (CAGR) from 2009–2014 of 55.3%.</p> <p>This ranks Thailand 18th for total international Internet bandwidth and 1st for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec. 2016) &lt;www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx&gt;]</p>

# THAILAND	RESPONSE	EXPLANATORY TEXT
6.4. International Internet Bandwidth (bits per second (bps) per Internet user) (2015) <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 97,747 bps</li> </ul>	64,907	<p>The international Internet bandwidth (per Internet user) of Thailand has increased by 18% since 2014. The growth from 2014 is below the five-year compound annual growth rate (CAGR) from 2010–2015 of 38.4%.</p> <p>This ranks Thailand 12th for international Internet bandwidth per user and 1st for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) &lt;<a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a>&gt;]</p>
<b>7. Fixed Broadband</b>		
7.1. Fixed Broadband Subscriptions (millions) (2015) <ul style="list-style-type: none"> <li>Total for all countries in this scorecard: 697 million</li> </ul>	6	<p>Thailand has increased the number of fixed broadband subscribers by 15% since 2014 to 6.23 million, and is ranked 22nd out of 236 countries surveyed by the ITU. The growth from 2014 is close to the five-year compound annual growth rate (CAGR) from 2010–2015 of 13.9%.</p> <p>This ranks Thailand 20th for the number of fixed broadband subscriptions and 3rd for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) &lt;<a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a>&gt;]</p>
7.2. Fixed Broadband Subscriptions (% of households) (2015) <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 63%</li> </ul>	32%	<p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) &lt;<a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a>&gt;]</p> <p>Note: This may be skewed by business usage in some countries.</p>
7.3. Fixed Broadband Subscriptions (% of population) (2015) <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 21%</li> </ul>	9%	<p>Thailand has increased its fixed broadband subscriptions (as a % of the population) by 14.2% since 2014, which is above the five-year compound annual growth rate (CAGR) from 2010–2015 of 13.5%. This ranks Thailand 104th out of 236 countries surveyed by the ITU.</p> <p>This ranks Thailand 20th for the number of fixed broadband subscriptions (as a % of the population) and 3rd for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) &lt;<a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a>&gt;]</p>
7.4. Fixed Broadband Subscriptions (% of Internet users) (2015) <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 29%</li> </ul>	24%	<p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) &lt;<a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a>&gt;]</p>
7.5. Average Broadband Data Connection Speed (total megabits per second (Mbps) per country) (Q1 2017) <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 12 Mbps</li> <li>Average peak for all countries in this scorecard: 70 Mbps</li> </ul>	16	<p>In Thailand the Q1 2017 average broadband data connection speed was 16 Mbps and is ranked 25th out of 239 countries measured by Akamai.</p> <p>This ranks Thailand 7th for average broadband data connection speed in this scorecard.</p> <p>Additional connection metrics for Q1 2017 in Thailand include:</p> <ul style="list-style-type: none"> <li>Average peak broadband connection speed: 106.58 Mbps (ranked 9th globally and 3rd in this scorecard)</li> <li>Above 4 Mbps: 97% (ranked 7th globally and 2nd in this scorecard)</li> <li>Above 10 Mbps: 72% (ranked 6th globally and 4th in this scorecard)</li> <li>Above 15 Mbps: 43% (ranked 15th globally and 5th in this scorecard)</li> <li>Above 25 Mbps: 12% (ranked 32nd globally and 9th in this scorecard)</li> </ul> <p>[Akamai, The State of the Internet (1st Quarter, 2017) &lt;<a href="http://www.akamai.com/us/en/about/our-thinking/state-of-the-internet-report/">www.akamai.com/us/en/about/our-thinking/state-of-the-internet-report/</a>&gt;]</p>
<b>8. Fiber-to-the-home/building (FttX)</b>		
8.1. Fiber-to-the-home/building (FttX) Internet Subscriptions (millions) (2015) <ul style="list-style-type: none"> <li>Total for all countries in this scorecard: 258 million</li> </ul>	0.9	<p>Thailand has increased the number of FttX subscribers by 148% since 2014 to 0.875 million, and is ranked 23rd out of 236 countries surveyed by the ITU.</p> <p>This ranks Thailand 14th for the number of FttX subscriptions and 3rd for growth (from 2014) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) &lt;<a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a>&gt;]</p>

# THAILAND	RESPONSE	EXPLANATORY TEXT
8.2. Proportion of Fiber-to-the-home/building (FtTX) Internet Subscriptions (% of households) (2015) <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 18%</li> </ul>	4.5%	<p>Thailand has increased the proportion of FtTX subscribers to households by 148% (since 2014) to 4.48%.</p> <p>This ranks Thailand 15th for the proportion of FtTX subscriptions to households and 3rd for growth (from 2014) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) &lt;<a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a>&gt;]</p> <p>Note: This may be skewed by business usage in some countries.</p>
8.3. Proportion of Fiber-to-the-home/building (FtTX) Internet Subscriptions (% of fixed broadband subscriptions) (2015) <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 23%</li> </ul>	14.0%	<p>Thailand has increased the proportion of FtTX subscribers to fixed broadband subscribers by 148% (since 2014) to 14.05%.</p> <p>This ranks Thailand 10th for the proportion of FtTX subscriptions to fixed broadband subscriptions and 3rd for growth (from 2014) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) &lt;<a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a>&gt;]</p>
9. Mobile Broadband		
9.1. Mobile Cellular Subscriptions (millions) (2015) <ul style="list-style-type: none"> <li>Total for all countries in this scorecard: 4,823 million</li> </ul>	103	<p>In 2015, Thailand increased the number of mobile cellular subscriptions by 6% since 2014, which is below the five-year compound annual growth rate (CAGR) from 2010–2015 of 7.5%. Thailand is ranked 14th out of 236 countries surveyed by the ITU. The number of subscriptions account for 153% of the population.</p> <p>This ranks Thailand 10th for the number of mobile cellular subscriptions and 4th for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) &lt;<a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a>&gt;]</p> <p>Note: This figure may be inflated due to multiple subscriptions per head of population, but excludes dedicated mobile broadband devices (such as 3G data cards, tablets, etc.).</p>
9.2. Number of Active Mobile Broadband Subscriptions (millions) (2015) <ul style="list-style-type: none"> <li>Total for all countries in this scorecard: 2,506 million</li> </ul>	60	<p>In 2015, Thailand has increased the number of active mobile broadband subscriptions by 11%, which is below the four-year compound annual growth rate (CAGR) from 2011–2015 of 203.9%. Thailand is ranked 9th out of 236 countries surveyed by the ITU.</p> <p>This ranks Thailand 9th for the number of active mobile broadband subscriptions and 1st for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) &lt;<a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a>&gt;]</p>
9.3. Active Mobile Broadband Subscriptions (% of population) (2015) <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 77%</li> </ul>	89%	<p>Thailand has increased the number of active mobile broadband subscriptions (as a % of the population) by 11% since 2014, which is below the four-year compound annual growth rate (CAGR) from 2011–2015 of 202.9%. Thailand is ranked 29th out of 236 countries surveyed by the ITU.</p> <p>This ranks Thailand 8th for the number of active mobile broadband subscriptions (as a % of the population) and 1st for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) &lt;<a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a>&gt;]</p> <p>Note: This refers to the sum of standard mobile broadband and dedicated mobile broadband subscriptions to the public Internet. It covers actual subscribers, not potential subscribers, even though the latter may have broadband enabled-handsets.</p>
9.4. Average Mobile Data Connection Speed (total megabits per second (Mbps) per country) (Q1 2017) <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 11 Mbps</li> </ul>	9	<p>In Thailand the Q1 2017 average mobile data connection speed was 8.6 Mbps and is ranked 45th out of 70 countries measured by Akamai.</p> <p>This ranks Thailand 16th for average mobile data connection speed in this scorecard.</p> <p>[Akamai, The State of the Internet (1st Quarter, 2017) &lt;<a href="http://www.akamai.com/us/en/about/our-thinking/state-of-the-internet-report/">www.akamai.com/us/en/about/our-thinking/state-of-the-internet-report/</a>&gt;]</p>